

**COLORADO DISCHARGE PERMIT SYSTEM (CDPS)  
FACT SHEET FOR PERMIT NUMBER CO0000004  
CH2M HILL ENGINEERS, INC.,  
METRO WASTEWATER RECLAMATION DISTRICT NORTHERN TREATMENT PLANT  
WELD COUNTY**

**TABLE OF CONTENTS**

|  |    |
|--|----|
| I. TYPE OF PERMIT.....                     | 1  |
| II. FACILITY INFORMATION.....              | 1  |
| III. RECEIVING STREAM.....                 | 2  |
| IV. FACILITY DESCRIPTION .....             | 2  |
| V. DISCUSSION OF EFFLUENT LIMITATIONS..... | 2  |
| VII. ADDITIONAL TERMS AND CONDITIONS ..... | 10 |
| VIII. REFERENCES.....                      | 11 |
| VIII. PUBLIC NOTICE COMMENTS.....          | 12 |

**I. TYPE OF PERMIT**

- A. Permit Type:** Individual Industrial Permit
- B. Discharge To:** Surface Water

**II. FACILITY INFORMATION**

- A. SIC Code:** 1799 Groundwater Dewatering/Remediation
- B. Facility Classification:** Class D per Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements
- C. Facility Location:** Latitude: 40.005°N, Longitude: 104.822°W
- D. Permitted Feature:** 001A: 40°00'30" N, 104°49'24" W  
002A: 40°00'15" N, 104°49'25" W  
003A: 40°00'04" N, 104°49'33" W

**The facility can discharge from any of the outfalls without using settling pond if all the discharge limitations are met without using the settling pond. Total flow is set to 4 MGD if/when multiple outfalls are operated simultaneously.**

The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.

- E. Facility Flows:** 4 MGD

### III. RECEIVING STREAM

**A. Waterbody Identification:** *COSPUS15, South Platte River*

**B. Water Quality Assessment:**

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for South Platte River for potential pollutants of concern. This information, which is contained in the Preliminary Effluent Limitations (PEL) for the Northern Treatment Facility for this receiving stream, also includes an antidegradation review, where appropriate. Note that most of the limitations for the Northern Treatment Facility (at a design capacity of 24 mgd) are being applied in this permit for dewatering, with the exception of iron, aluminum, and benzene, which were developed in the addendum to the PEL, specifically for the design flow to be used in this dewatering/remediation permit (design flow of 4 mgd). The limitations based on the original PEL and the addendum to the PEL and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Permitted Features are 001A, 002A and 003A.

### IV. FACILITY DESCRIPTION

**A. Facility Activity:** The facility is located near Weld County Road 2 (168<sup>th</sup> Avenue), and discharges to the South Platte mainstem. The activity will include dewatering for the construction of the wastewater treatment facility including all applicable building and processes. Construction is expected to begin early 2013 and be completed by June 2016.

**B. Source of wastewater:** Dewatering wells, and dewatering of foundation excavation and trenching areas. The waste streams will be directed to a settling pond as necessary to meet limitations and will be discharged to the South Platte River. The facility will have flexibility to discharge without using settling pond if the limitations can be met without it.

**C. Wastewater Treatment Description**

At this time the facility will have a settling pond to collect wastewater. This will require a Class D facility operator based on WQCC Regulation 100, Water and Wastewater Facility Operators Certification Requirements.

### V. DISCUSSION OF EFFLUENT LIMITATIONS

**A. Regulatory Basis for Limitations**

1. Technology Based Limitations

- a. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters. These regulations are applicable to the discharge from the facility.

2. Numeric Water Quality Standards - The PEL and the addendum to the PEL contains the evaluation of pollutants limited by water quality standards. The mass balance equation is used for most pollutants to calculate the potential water quality based effluent limitations (WQBELs),  $M_2$ , that could be discharged without causing the water quality standard to be violated. For ammonia, the AMMTOX Model is used to determine the maximum assimilative capacity of the receiving stream.

The maximum allowable effluent pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.

3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.
  - a. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.
4. Water Quality Regulations, Policies, and Guidance Documents
  - a. Antidegradation - Since the receiving water is Use-protected, an antidegradation review is not required pursuant to Section 31.8 of The Basic Standards and Methodologies for Surface Water.
  - b. Antibacksliding – As the receiving water is designated Use-Protected, the antibacksliding requirements in Regulation 61.10 have been met.
  - c. Determination of Total Maximum Daily Loads (TMDLs) –The receiving stream to which the discharge is planned, currently listed on the State's 303(d) list for development of TMDLs for E.coli. However, the TMDL has not yet been finalized. Although this permit establishes limits for these pollutants, they do not represent the TMDLs and waste load allocations, and are therefore subject to change upon finalization of an approved TMDL for this segment. Even though E.coli is not expected in the dewatering there is a potential that E.coli can be introduced in the settling pond.
  - d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document

provides for certain exclusions from further analysis under the regulation, based on site-specific conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) is greater than 2:1 or if the ratio of the chronic low flow to the design flow is greater than 20:1. Since the ratio of the chronic low flow to the design flow is 24.8:1 permittee is eligible for an exclusion from further analysis under the regulation.

- e. Reasonable Potential Analysis – Using the assimilative capacities contained in the PEL, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must

be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table VI-1 contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

**Table VI-1 – Reasonable Potential Analysis**

| <i>Pollutant</i>    | <i>Maximum of 30-Day Avg Effluent Conc. Or MEPC</i> | <i>30-Day Avg Proposed WQBEL</i> | <i>30-Day Avg RP</i> | <i>Maximum of Daily Max or 7-Day Avg Effluent Conc. Or MEPC</i> | <i>Daily Max or 7-Day Avg Proposed WQBEL</i> | <i>Daily Max RP</i> |
|---------------------|---|----------------------------------|----------------------|---|--|---------------------|
| DO (mg/l)           |   |                                  | 5*                   | NA  | 3  | Monitor             |
| E. coli (#/100 ml)  | NA  | 126                              | Monitor              | NA  | 252  | Monitor             |
| Nitrate as N (mg/l) | NA  |                                  |                      | NA  | 10   | Yes (Qual)          |
| Al, TR (µg/l)       | 16500   | 16042                            | Yes (Qual)           | 16500   | 173687                                       | No (Qual)           |
| As, TR (µg/l)       | 6.4   | 10                               | Yes (Qual)           | NA  | NA   | NA                  |
| As, Dis (µg/l)      | NA  | NA                               | NA                   | 6.4   | 1155   | No (Qual)           |
| Cd, Dis (µg/l)      | 0.93  | 1.76                             | Yes (Qual)           | 0.93  | 18.7   | No (Qual)           |
| Cr+3, TR (µg/l)     | NA  | NA                               | NA                   | 18.3  | 173  | No (Qual)           |
| Cr+6, Dis (µg/l)    | 18.3  | 49                               | No (Qual)            | 18.3  | 55.5   | No (Qual)           |
| Cu, Dis (µg/l)      | 20.1  | 176                              | No (Qual)            | 20.1  | 226  | No (Qual)           |
| CN, Free (µg/l)     |   |                                  |                      | NA  | 94   | No (Qual)           |
| Fe, Dis (µg/l)      | 55.2  | 1155***                          | No (Qual)            |   |  |                     |
| Fe, TR (µg/l)       | 26100   | 12177                            | Yes (Qual)           |   |  |                     |
| Pb, Dis (µg/l)      | 13.4  | 28.4                             | No (Qual)            | 13.4  | 555  | No (Qual)           |
| Mn, Dis (µg/l)      | 431   | 1001                             | Yes (Qual)           | 431   | 15077  | No (Qual)           |
| Mo, TR (µg/l)       | 5.1   | 210                              | No (Qual)            | NA  | NA   | NA                  |
| Hg, Tot (µg/l)      | NA  | 0.045                            | Yes (Qual)           | NA  | NA   | NA                  |
| Ni, Dis (µg/l)      | 7   | 472                              | No (Qual)            | 7   | 3319   | No (Qual)           |
| Se, Dis (µg/l)      | 3.8   | 12.9                             | No (Qual)            | 3.8   | 58.2   | No (Qual)           |
| Ag, Dis (µg/l)      | 0.31  | 6.33                             | Yes (Qual)           | 0.31  | 30.2   | No (Qual)           |
| Zn, Dis (µg/l)      | NA  | NA                               | NA                   | 92.3  | 937  | No (Qual)           |
| Chloride (mg/l)     | NA  | 582                              | Yes (Qual)           | NA  | NA   | NA                  |
| Sulfate (mg/l)      | NA  | 485                              | Yes (Qual)           | NA  | NA   | NA                  |
| Benzene (µg/l)      | NA  | 46                               | Yes (Qual)           | NA  | NA   | NA                  |
| BTEX (µg/l)         | NA  | NA                               | NA                   | NA  | 100**  | Yes (Qual)          |

\* 7-day average minimum; \*\*no dilution is applicable, technology base limit, older version of the PEL

## B. Parameter Evaluation

The Division has completed a Reasonable Potential (RP) analysis for the discharge to determine the need for effluent limitations for pollutants that have a reasonable potential to cause or contribute to an exceedance of water quality standards. Data (based on samplings conducted in November) provided with the application for the following wells were reviewed: SW-15, SW-21, SW-27, SW-32, SW-44; Elms 1-6, Taylor 7-14, Winchester 15-17. The facility data taken in December show lower metal concentrations due possibly to the stabilization of the well. However, the Division will be most conservative to use the highest concentrations provided.

Influent Monitoring for Metals and Organics – A condition will be added to the permit to monitor inflow concentrations of organics and of metals, quarterly, based on the information available to the Division that shows that the proposed site is near several Leaking Underground Storage Tanks (LUST) sites, a Voluntary Clean Up (VCUP) site (Brighton Industrial Park), and a corrective action site (Black Hills Trucking). It is reasonably expected that with large scale dewatering projects it is possible to pull in contamination from off-site areas and therefore, influent monitoring will be required to determine if concentrations increase, or if alternate sources of contamination appear. If the presence of these parameters are noted, or the concentrations of these parameters increase, then the limits and monitoring requirements for those parameters specifically listed as such in the permit limits table will be effective. If concentrations for other organics are detected that are not included in the limits table, the facility will notify the Division as required in the permit, and the permit may be reopened to add limitations for those parameters pending an assessment of the potential water quality impact and calculated limitations.

#### Effluent Monitoring

BOD<sub>5</sub> – This parameter is not expected since there is no domestic wastewater contribution to the waste stream.

Total Suspended Solids - The TSS concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. These limitations are imposed upon the effective date of this permit.

Oil and Grease –The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations. This limitation is imposed upon the effective date of this permit.

pH - This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards. This limitation is imposed upon the effective date of this permit.

E. Coli – The receiving water is listed on the 303(d) impaired waters of state list for this parameter. The limitation for E. Coli is applicable as report only to this permit since the segment is listed in 303(d) list for impaired waters of the State. It should be noted that the facility representative mentioned that pervious sampling showed E.coli of zero in the monitoring well data collected. The sampling frequency is set to ‘Monthly’ since it is monitoring only.

Nitrate/ TIN – The Division will apply the TIN limitation based on the original PEL. The PEL sets the nitrate/TIN limit at 10 mg/l and as there is no data to show effluent discharge concentration, a limit will be added to the permit based on a qualitative RP.

Total Recoverable Aluminum – A qualitative RP analysis was conducted for Total Recoverable Aluminum as there was not enough data to conduct a quantitative RP analysis. Sample results for Aluminum were as high as 16,500 µg/L, compared to the effluent limitation of 16042 µg/L (chronic) and 173687 µg/L (acute). Therefore, a qualitative determination of RP has been made for 30-day average limitation only and will be added and imposed upon the effective date of the permit.

Total Recoverable Arsenic - A qualitative RP analysis was conducted for Total Recoverable Arsenic as there was not enough data to conduct a quantitative RP analysis. Sample results for Arsenic were as high as 6.4 µg/L, compared to the effluent limitation of 10 µg/L. Therefore, a qualitative determination of RP has been made for 30-day average limitation and will be added and imposed upon the effective date of

the permit.

Dissolved Arsenic - A qualitative RP analysis was conducted for Dissolved Arsenic as there was not enough data to conduct a quantitative RP analysis. Sample results for Arsenic were as high as 6.4 µg/L (TR Arsenic), compared to the effluent limitation of 1155 µg/L. Since this value is significantly lower than potential limitation, and the limit is protected by the TR arsenic limit, no limitation for dissolved arsenic will be added to the permit.

Potentially Dissolved Cadmium - A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for cadmium were as high as 0.93 µg/L, compared to the effluent limitation of 1.76 µg/L (chronic) and 18.7 µg/L (acute). Therefore, a qualitative determination of RP has been made for 30-day average limitation and will be added and imposed upon the effective date of the permit.

Total Recoverable Trivalent Chromium - A qualitative RP analysis was conducted for Total Recoverable Trivalent Chromium as there was not enough data to conduct a quantitative RP analysis. Sample results for Total Recoverable Chromium were as high as 18.3 µg/L, compared to the effluent limitation of 173 µg/L. Since this value is significantly lower than potential limitation, no limitation will be added to the permit.

Dissolved Hexavalent Chromium - A qualitative RP analysis was conducted for Dissolved Hexavalent Chromium as there was not enough data to conduct a quantitative RP analysis. Sample results for Total Recoverable Chromium were as high as 18.3 µg/L, compared to the effluent limitations of 49/55.5 µg/L. Therefore, a qualitative determination of RP has been made for 30-day average and daily maximum limitations and limitations will be added to the permit.

Potentially Dissolved Copper - A qualitative RP analysis was conducted for Copper as there was not enough data to conduct a quantitative RP analysis. Sample results for Copper were as high as 20.1 µg/L, compared to the effluent limitation of 176 µg/L (chronic) and 226 µg/L (acute). Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit.

Cyanide - The potential cyanide limitation for the effluent is 94 µg/L (acute). A qualitative no RP has been made for this parameter since the potential limitation is considerably high. Therefore no limitation will be added to the permit.

Total Recoverable Iron - A qualitative RP analysis was conducted for Total Recoverable Iron as there was not enough data to conduct a quantitative RP analysis. Sample results for Iron were as high as 26,100 µg/L, compared to the effluent limitation 12177 µg/L (chronic). There is no acute standard. Therefore, a qualitative determination of RP has been made and limitations will be added and imposed upon the effective date of the permit.

Dissolved Iron - A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for dissolved iron were as high as 55.2 µg/L, compared to the effluent limitation of 1155 µg/L. Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit.

Potentially Dissolved Lead - A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for lead were as high as 13.4 µg/L, compared to the effluent limitation of 28.4 µg/L (chronic) and 555 µg/L (acute). Therefore, a qualitative determination of RP has been made for 30-day average limitation and limitations will be added to the

permit.

Dissolved Manganese - A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for manganese were as high as 431 µg/L, compared to the effluent limitation of 1001 µg/L (chronic) and 13169 µg/L (acute, PD). Therefore, a qualitative determination of RP has been made for 30-day average limitation and limitation will be added to the permit.

Total Mercury - The Division will apply the mercury limitation based on the PEL. The PEL sets the limit at 0.045 µg/L and as there is no data to show magnitude of the effluent discharge concentration, a limit will be added to the permit based on a qualitative RP.

Potentially Dissolved Nickel - A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for nickel were as high as 7 µg/L, compared to the effluent limitation of 472 µg/L (chronic) and 3319 µg/L (acute). Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit.

Potentially Dissolved Selenium - A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for selenium were as high as 3.8 µg/L, compared to the effluent limitation of 12.9 µg/L (chronic) and 58.2 µg/L (acute). Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit.

Potentially Dissolved Silver - A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for silver were as high as 0.31 µg/L, compared to the effluent limitation of 6.33 µg/L (chronic) and 30.2 µg/L (acute). Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit.

Potentially Dissolved Zinc - A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for zinc were as high as 92.3 µg/L, compared to the effluent limitation of 937 µg/L (acute). Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit.

Chloride and Sulfate - The potential limitations for the discharge for these parameters are 637 (chloride) and 485 (sulfate) mg/l. A qualitative RP has been made for these parameters as there is no preliminary data from the facility, and the limitations are close to the stream standards. Therefore limitation will be added to the permit.

Benzene - Information available to the Division showed that the proposed site is near several Leaking Underground Storage Tanks (LUST) sites, a Voluntary Clean Up (VCUP) site (Brighton Industrial Park), and a corrective action site (Black Hills Trucking). Therefore, benzene has been considered to be included in the permit. Potential limitation for this parameter has been calculated to be 46 µg/L based on a upstream concentration of 0.54 µg/L (based on South Platte data collected by Suncor). One-time data analysis showed that benzene was non-detect in the effluent. However, a qualitative RP has been made for this parameter and limitation will be added to the permit. The limit which will be contingent upon the inflow concentration increase/detection, will be added to the permit to ensure no off-site contribution detected by inflow sampling is occurring.

BTEX - Information available to the Division showed that the proposed site is near several Leaking Underground Storage Tanks (LUST) sites, a Voluntary Clean Up (VCUP) site (Brighton Industrial



Park), and a corrective action site (Black Hills Trucking). Therefore, BTEX has been considered to be included in the permit. Potential limitation for this parameter is 100 µg/L (technology limit). One-time data analysis showed that BTEX components were non-detect in the effluent. However, a qualitative RP has been made for this parameter and limitation will be added to the permit. The limit which will be contingent upon the inflow concentration increase/detection, will be added to the permit to ensure no off-site contribution detected by inflow sampling is occurring.

Whole Effluent Toxicity (WET) Testing – This is a large dewatering project that will discharge metals. These parameters and their compounded interaction can be harmful to the aquatic life and therefore a WET testing will be added to the permit.

1. In-Stream Waste Concentration (IWC) – Where monitoring or limitations for WET are deemed appropriate by the Division, the chronic in-stream dilution is critical in determining whether acute or chronic conditions shall apply. In accordance with Division policy, for those discharges where the chronic IWC is greater than 9.1% and the receiving stream has a Class 1 Aquatic Life use or Class 2 Aquatic Life use with all of the appropriate aquatic life numeric standards, chronic conditions will normally apply. Where the chronic IWC is less than or equal to 9.1, or the stream is not classified as described above, acute conditions will normally apply. The chronic IWC is determined using the following equation:

$$\text{IWC} = [\text{Facility Flow (FF)} / (\text{Stream Chronic Low Flow (annual)} + \text{FF})] \times 100\%$$

The flows and corresponding IWC for the appropriate discharge point are:

| Permitted Feature | Chronic Low Flow,<br>30E3 (cfs) | Facility Design Flow<br>(cfs) | IWC, (%) |
|-------------------|---------------------------------|-------------------------------|----------|
| 001A/002A/003A    | 154                             | 6.2                           | 4        |

The IWC for this permit is 4%, which represents a wastewater concentration of 4% effluent to 96% receiving stream.

2. General Information – The permittee should read the WET testing section of Part I of the permit carefully, as this information has been updated in accordance with the Division's updated policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). The permit outlines the test requirements and the required follow-up actions the permittee must take to resolve a toxicity incident. The permittee should also read the above mentioned policy which is available on the Permit Section website. The permittee should be aware that some of the conditions outlined above may be subject to change if the facility experiences a change in discharge, as outlined in Part II.A.2. of the permit. Such changes shall be reported to the Division immediately.

### C. Parameter Speciation

Total / Total Recoverable Metals (EXCEPT Arsenic)

For standards based upon the total and total recoverable methods of analysis, the limitations are based upon the same method as the standard.

Total / Total Recoverable Arsenic

For total recoverable arsenic, the analysis may be performed using a graphite furnace, however, this method may produce erroneous results and may not be available to the permittee. Therefore, the total method of analysis will be specified instead of the total recoverable method.

#### Total Mercury

Until recently there has not been an effective method for monitoring low-level total mercury concentrations in either the receiving stream or the facility effluent. Monitoring for total mercury has been accomplished as part of past permit conditions and analytical results have all been found at less than detectable levels. However, detection levels only as low as 0.2 ug/l have been achieved, versus a total mercury limit of 0.011 ug/l.

To ensure that adequate data are gathered to show compliance with the limitation and consistent with Division initiatives for mercury, quarterly effluent monitoring for total mercury at low-level detection methods will be required by the permit.

#### Dissolved Iron and Dissolved Manganese if WS based

The dissolved iron and chronic manganese standards are drinking water-based standards. Thus, sample measurements for these two parameters must reflect the dissolved fraction of the metals.

#### Dissolved Metals / Potentially Dissolved

For metals with aquatic life-based dissolved standards, effluent limits and monitoring requirements are typically based upon the potentially dissolved method of analysis, as required under Regulation 31, Basic Standards and Methodologies for Surface Water. Thus, effluent limits and/or monitoring requirements for these metals will be prescribed as the “potentially dissolved” form.

## VII. ADDITIONAL TERMS AND CONDITIONS

### A. Reporting

1. Discharge Monitoring Report – The facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.A of the permit. See the permit, Part I.B, C and D for details on such submission.
2. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.

### B. Signatory and Certification Requirements

Signatory and certification requirements for reports and submittals are discussed in Part I.D.6. of the permit.

### D. Compliance Schedules

None

## E. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

- a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or
- b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin, considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the Division during the public notice period.

**Kenan Diker**  
**December 13, 2012**

## VIII. REFERENCES

- A. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 1, 2012.
- B. Classifications and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin, Regulation No. 38, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 1, 2012.
- C. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 30, 2012.
- D. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2008.

- E. Colorado's Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 30, 2012.
- F. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.
- G. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.
- H. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2002.
- I. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.
- J. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.
- K. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.
- L. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing, Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.
- M. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department of Public Health and Environment, Water Quality Control Division, Policy Number WQP-23, effective July 3, 2008.
- N. Policy for Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number WQP-30, effective December 2, 2010.
- O. Regulation Controlling discharges to Storm Sewers, Regulation No. 65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.
- P. Water and Wastewater Facility Operator Certification Requirements, Regulation No. 100, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2007.

## **VIII. PUBLIC NOTICE COMMENTS**

The public notice period was from December 13, 2012 to January 14, 2013. No comments have been received during the public notice.

Kenan Diker

January 15, 2013